

# MAHON

THE R. C. MAHON COMPANY  
DETROIT 34, MICHIGAN  
MANUFACTURING PLANTS  
Detroit, Michigan and Torrance, California

## rolling steel doors... grilles and shutters



VERSATILE  
SPACE-SAVERS  
THAT FIT  
ANY OPENING,  
ANY ARCHITECTURE,  
ANY TYPE  
INSTALLATION.

QUALITY MADE  
BY MAHON IN  
STANDARD OR  
UNDERWRITERS'  
LABELED MODELS  
PLUS SPECIAL  
TYPES

# MAHON

## rolling steel doors . . . grilles and shutters

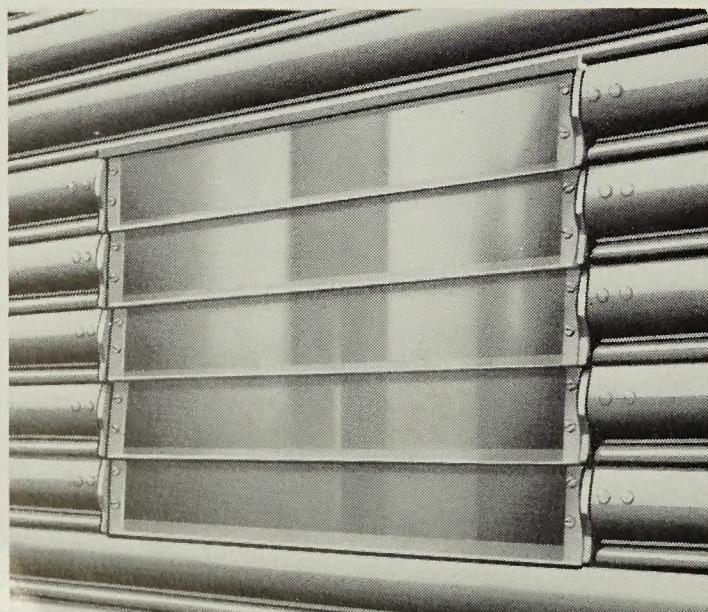
Quality made for easy operation, long life and low maintenance in attractive and functional models. They are supplied in standard, special and Underwriters' labeled types to meet all industrial, institutional or commercial needs.

### STANDARD DOORS

Mahon Standard (nonlabeled) Rolling Steel Doors are made with interlocking slats rolled from cold rolled, hot-dipped Galvanized Steel (1.25 Ounces of Zinc per Sq. Ft., A.S.T.M. Std.), Stainless Steel, Aluminum or Bronze. These interlocking slats are designed to provide maximum rigidity and are fitted with malleable iron endlocks to provide a wearing surface and insure free, easy operation. The tubular roller shaft, to which the door curtain is attached, is exceptionally rigid and operates in appropriate end-bracket bearings.

The weight of the door curtain is counterbalanced by means of oil-tempered, helical, steel springs located inside the roller shaft. The torque-tension of these springs is readily adjustable to provide perfect balance. This feature, particularly important in all types of manually operated doors, safely maintains the position of the door curtain at all times, and, in electrically operated doors, relieves the operating load.

### MAHON TRANSPARENT WINDOWS



Mahon Standard Rolling Steel Doors can be furnished with one or more eye-level Transparent Windows.

### WICKET OR SERVICE DOOR

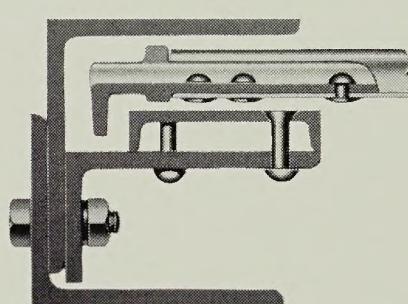
Mahon Standard Rolling Steel Doors can be furnished with a small wicket or service door in the lower corner of the door opening. These small wicket or service doors and their frames are hinged to the regular guides and may be swung clear of the door opening.

### INTERMEDIATE HINGED, SLIDING, OR REMOVABLE POSTS

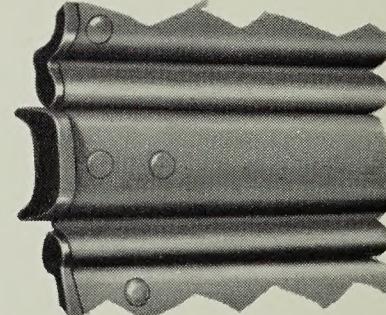
For detailed information and design data, see Page 13.

### WINDLOCKS

All Mahon Standard Rolling Steel Doors can be equipped with Windlocks to prevent the door curtain from pulling out of the guides due to excessive wind pressure. In certain localities, and under certain conditions of exposure to wind, Heavier Gauge Curtain Slats in addition to the Windlocks will be required. They should be specified when deemed necessary by architects or purchasing agencies. Normally, Mahon Doors under 16'-0" in width do not require Windlocks. Special end brackets and guide channels are provided to accommodate the Windlock Lugs which are an integral part of an endlock attached to the interlocking curtain slats at suitable intervals between the regular malleable iron endlocks.



Cross Section of Special Guides  
Furnished with all Mahon Doors  
Equipped with Windlocks



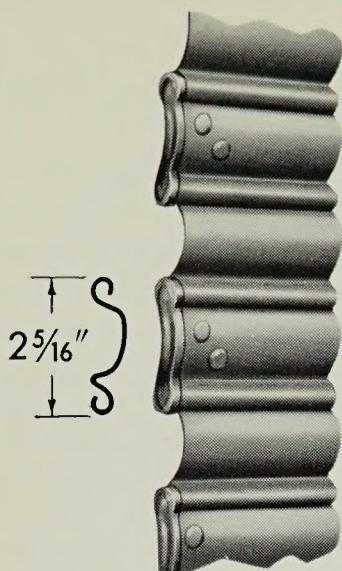
Mahon No. 3 Interlocking Slats  
Showing Application of Combination Endlock and Windlock

### MAHON SPECIAL WEATHERING

Mahon engineers have developed special weathering features for Mahon Standard Rolling Steel Doors to provide better sealing at jambs, sill and lintel.

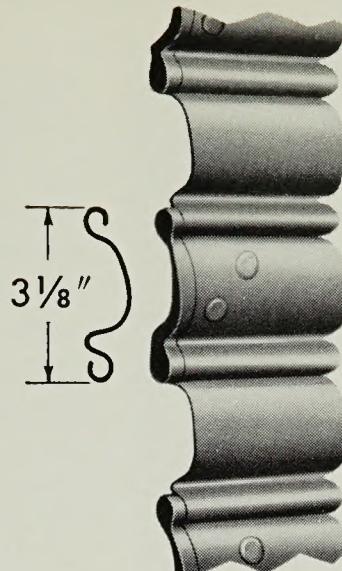
Doors equipped with Special Weathering are fitted with Continuous, Flat Endlocks which operate between two closely fitting metal slide bars on the inside of the guide channels. This forms a double barrier against wind passage; thereby providing effective weathering at the jambs. Mahon Special Weathering Endlocks can also be furnished with Windlock Lugs—see Cut. These can be installed on every Curtain Slat, or as alternates at intervals specified.

## MAHON STANDARD INTERLOCKING SLATS

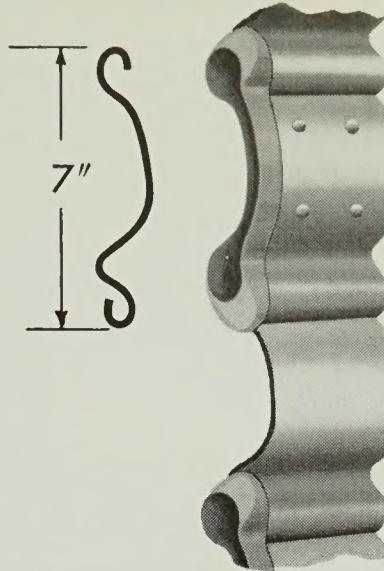


Slat No. 2—6.21 Slats Per Ft.

Note arrangement of Malleable Iron Endlocks installed on Curtains of Mahon Standard Rolling Steel Doors



Slat No. 3—4.41 Slats Per Ft.

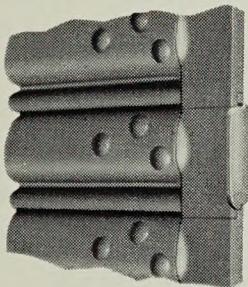


NEW—HEAVY-DUTY TYPE

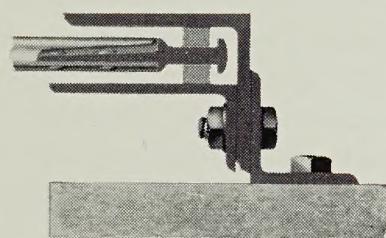
Slat No. 4—2.0 Slats Per Ft.

Two types of bottom bar seals are available for weathering at the sill: one is all metal, and consists of two angles back to back with a  $\frac{1}{2}$  in. step-down over the sill on the weather side. The other, is a compressible rubber seal on the standard double-angle-bottom bar.

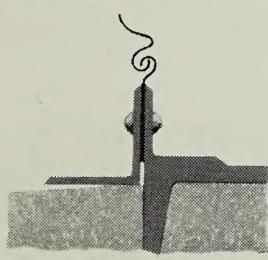
### MAHON SPECIAL WEATHERING



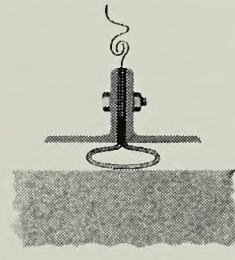
Mahon Interlocking Slat No. 3  
Fitted with Continuous Flat End-  
locks for Special Weathering



Cross Section of Guide Channel  
Showing Continuous Flat Endlocks  
operating between Weathering Bars



Cross Section of Bottom Bar  
and Sill Showing Special  
Weathering Arrangement



Bottom Bar Showing  
Compressible Rubber Seal  
Weathering at the Sill

### INSTALLATION

Mounting on the face of the wall with guide channels clear of the door jambs is general practice. This method allows 100% clear opening and provides protection for the guides. However, in many instances where head room above the lintel is limited, or other conditions prohibit "face of wall" mounting, Mahon Rolling Steel Doors can be furnished for installation in the door opening between jambs. In installations of this type the height of the door opening is decreased, due to the insertion of the roller shaft housing below the lintel—the amount depending upon the height of the door opening—and the opening width is also decreased due to the location of the guide channels on the jambs. These objections may be eliminated in new construction where "between jambs" installations are desired, by providing recesses for guides and space for the roller shaft housing and mechanism in the original plans.

### OPERATION

#### Manual and mechanical operation

Mahon Rolling Steel Doors can be furnished equipped with handles on the bottom rail, for manual operation, or Chain-Gear or Crank-Gear Operators for mechanical operation in Right or Left Hand types.

All Mahon Rolling Steel Doors are perfectly balanced by means of an adjustable counterbalancing mechanism. Manually operated doors, equipped with handles on the bottom rail, can be easily opened or closed by one person without effort. Details on Pages 8, 9, 10 and 11.

The Chain-Gear Operator consists of an endless chain, sprocket, and a series of gears on the roller shaft bracket. When installed on Mahon Underwriters' Labeled Rolling Steel Doors, the Chain-Gear Operator is equipped with an automatic release (See Page 5). For typical installations of each see Pages 11, 12 and 13.

The Crank-Gear Operator consists of a hand crank, gear box and a series of gears on the roller shaft bracket. The crank can be located on either side of the wall, or, the operator can be furnished for operation of the door from both sides of the wall if desired. This operator, when furnished with Underwriters' Labeled Doors, is also equipped with an automatic release (See Page 5). For typical installations see Page 14.

#### Power operation

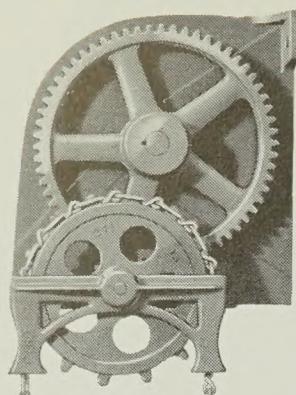
Mahon Power Operators are available in three types: Standard Type 920-P, Special Type 930-P, and Special Type 910-P. The Mahon Standard Power Operator, Type 920-P, is mounted on an independent bracket and can be located so as to meet virtually any requirement or condition imposed by adjacent physical obstructions.

Special Power Operator, Type 930-P, is essentially the same as Type 920-P except that it conforms to JIC Standards, and is, consequently, more expensive.

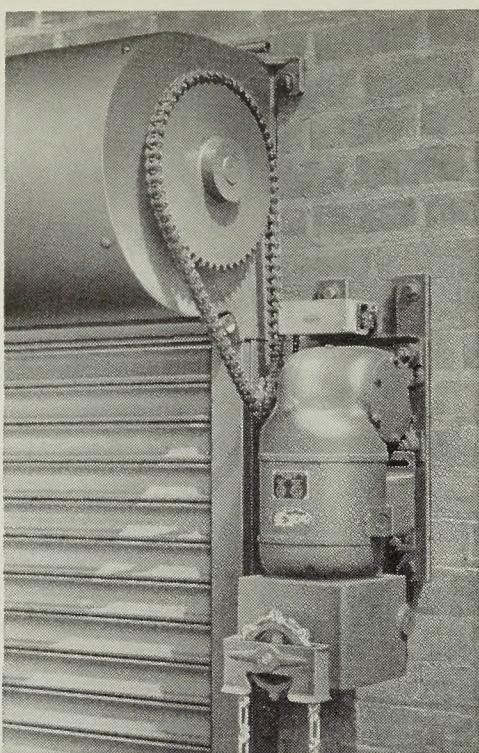
Power Operator 910-P is a more expensive unit built right into the roller shaft end bracket and em-

# MAHON ROLLING STEEL DOORS

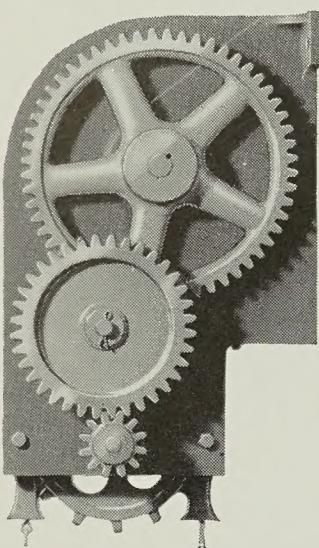
UNDERWRITERS' LABELED OR NONLABELED TO MEET EVERY REQUIREMENT



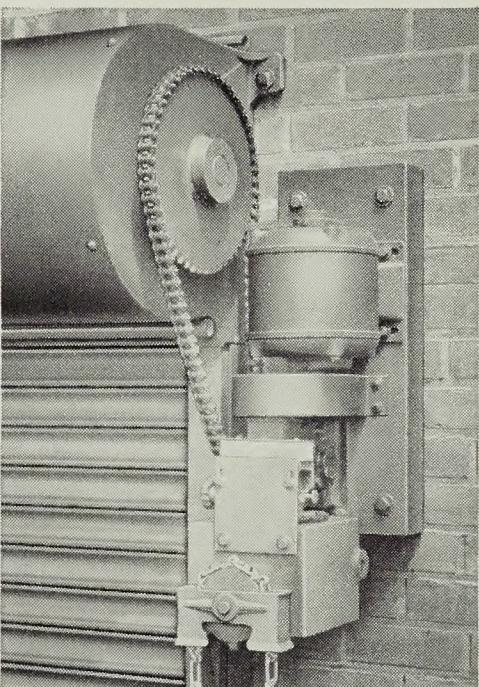
Mahon Simple Chain-Gear Operator for Small Doors



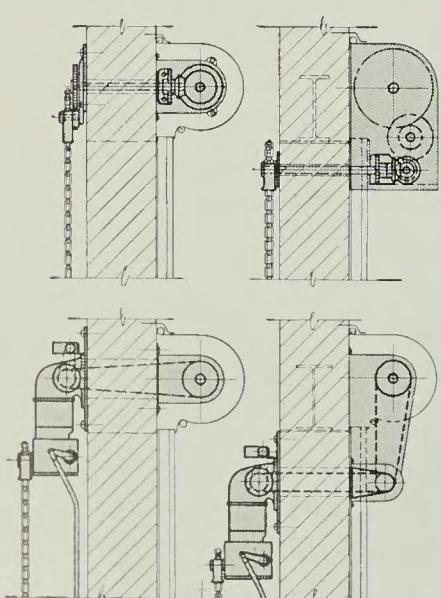
Mahon Standard Power Operator 920-P.  
Mounting on an Independent Bracket  
Allows Flexibility in its Location in  
Relation to the Door. Available in  
Right or Left Hand.



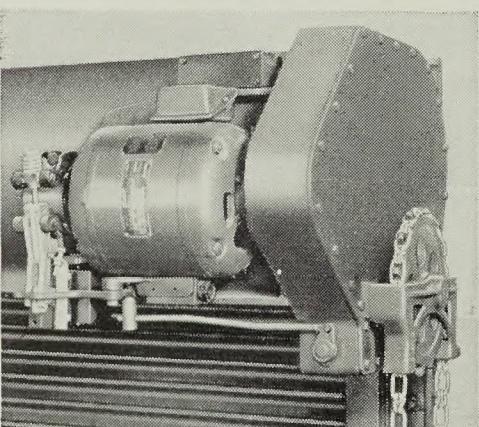
Mahon Compound Chain-Gear Operator for Larger Size Doors



Mahon Special Power Operator 930-P  
is essentially the same as 920-P except  
that it conforms to JIC Standards.  
Available in Right or Left Hand.



Typical Through-the-Wall Operating Devices Available with Mahon Mechanically and Power Operated Rolling Steel Doors Mounted on the Outside Face of Exterior Walls.



Mahon Special Power Operator 910-P.  
This Integral Bracket Operator, with  
its exclusive operating features, can  
be substituted for Mahon Standard  
Power Operator 920-P at EXTRA COST.  
Available in Right or Left Hand.

bodily some very desirable features not common to other types of power operators.

The Standard Power Operator, Type 920-P, consists of a mounting bracket, a single reduction worm gear-head motor providing an additional safety locking feature, an interlock, an automatic reversing switch, a limit switch, a solenoid brake, control switches, and an auxiliary chain-gear operator built as an integral part of the power operator. In case of failure in the electrical system, the auxiliary chain-gear operator can be instantly engaged by a simple movement of an engaging lever by means of a handle located within easy reach from the floor.

The Special Power Operator, Type 930-P, is essentially the same as the Standard Power Operator, Type 920-P, except that the motor and worm reducer are separate units to conform to JIC Standards, and the fact that the motor can be removed without interfering with the operation of the door by means of the auxiliary chain-gear operator. All other functional elements are identical.

Mahon Special Power Operator, Type 910-P, is a very compact operator and is so designed as to require no additional head room and a minimum of side clearance. It is an integral part of the roller shaft end bracket, and consists of an electric motor, a series of cut steel spur gears—**which are enclosed in an oil-tight gear housing and run in a bath of oil**—an interlock, a limit switch, a brake, and an auxiliary chain-gear operator built as an integral part of the power operator. In case of failure in the electrical system, the power unit can be instantly disengaged, and the auxiliary chain-gear operator engaged, by simple movement of a throw-out lever located within easy reach from the floor. **The electric motor can be completely removed from this operator without interfering with the operation of the door by means of the auxiliary chain-gear operating mechanism.**

All Mahon Standard and Special Power Operators are available in right and left hand. They are controlled by push button switches, including "Open" and "Close" buttons, and an emergency "Stop" button. Doors are set in motion by pushing either the "Open" or "Close" button, and are automatically stopped in the open or closed position by means of a limit switch and solenoid brake. The door curtain may be stopped in any position, however, by pushing the emergency "Stop" button. For installation details see page 15.

**Safety Bottom Bars, which stop the downward movement of the door curtain instantly upon contact with any obstruction, can be furnished with Mahon Power Operated doors.**

**NOTE:** In the installation of Mahon Power Operated Doors, all wiring and conduit will be furnished by others, but must be installed in accordance with the wiring diagram furnished by The R. C. Mahon Company.

## Specifications

Complete Specifications covering Mahon Rolling Steel Doors, Grilles and Fire Shutters appear on page 6 for the convenience of architects and other specifying agencies.

**NOTE:** The R. C. Mahon Company reserves the right to make changes in specifications without notice.

# MAHON ROLLING STEEL DOORS

UNDERWRITERS' LABELED OR NONLABELED TO MEET EVERY REQUIREMENT

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## Mahon Underwriters' Labeled Rolling Steel Doors

Mahon Underwriters' Labeled Doors are approved by the Underwriters' Laboratories, Inc., within certain limitations in total areas as specified by the Underwriters for various opening classifications. These limitations are based on requirements of the Underwriters' Laboratories, Inc., and apply to all fire doors of this type.

**FIRE WALL DOORS, CLASS "A"**—Approved for Fire Wall Openings not exceeding 120 sq. ft. in area.

**VERTICAL SHAFT DOORS, CLASS "B"**—Approved for Vertical Shaft Openings not exceeding 120 sq. ft. in area.

**CORRIDOR AND ROOM PARTITION DOORS, CLASS "C"**—Approved for Corridor or Room Partition Openings not exceeding 120 sq. ft. in area.

**EXTERIOR DOORS, CLASS "D"**—Approved for Exterior Wall Openings not exceeding 120 sq. ft. in area.

**NOTE: Underwriters' Certificate**—For 100% rating, neither dimension of the above listed openings may exceed 12'0". Mahon Rolling Steel Fire Doors, however, can be manufactured in strict accordance with the Underwriters' specifications and furnished with an "Underwriters' Certificate" for larger openings up to 24'0" x 24'0" where fire protection is desirable, or where insurance ratings are involved.

Underwriters' Labeled Rolling Steel Doors normally remain open. They are equipped with an automatic closing mechanism and a release device which is actuated by fusible links in case of fire. These doors, however, can be operated in general service, being fitted with handles on the bottom rail for manual operation, or equipped with Chain-Gear or Crank-Gear Operators for mechanical operation. In the event of fire, the automatic closing mechanism is released by means of fusible links and the door closes—the closing speed being controlled by an oscillating governor. A flame stop, also released automatically, closes the space between the hood and the roller shaft preventing the passage of flames through the hood. In the case of mechanically operated Labeled Doors, the Chain-Gear or Crank-Gear Operator is automatically disengaged simultaneously with the release of the automatic closing mechanism.

Mahon Underwriters' Labeled Doors can be quickly reset, after automatic closing, by simply resetting the automatic release device, replacing the fusible link, and rolling the door curtain up to the full-open position.

### Power Operators for Automatic Fire Doors

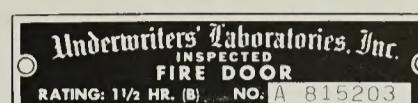
Mahon Automatic Closing Fire Doors can be manufactured in strict accordance with Underwriters' Specifications and furnished equipped with power operators for use in openings where the combined features of an automatic closing fire door and a power operated general service door are required. Mahon Automatic Fire Doors so equipped are fully as effective as Labeled Fire Doors, but do not carry the Label of the Underwriters' Laboratories, Inc.



Class "A" Underwriters' Label for  
Doors in Dividing Fire Walls



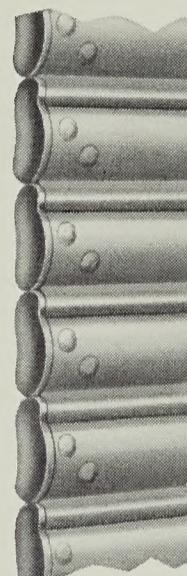
Class "C" Underwriters' Label for  
Partition and Corridor Doors



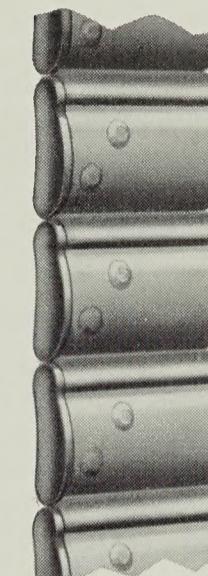
Class "B" Underwriters' Label for  
Doors in Vertical Shafts



Class "D" Underwriters' Label for  
Doors in Exterior Walls



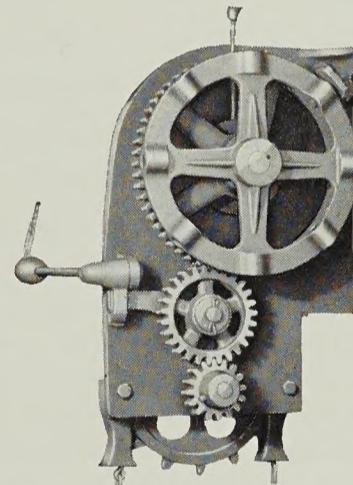
Mahon Interlocking  
Slat No. 2



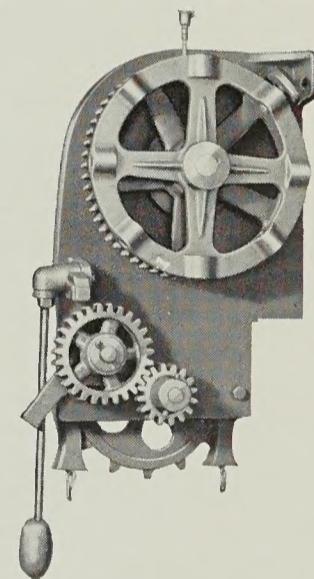
Mahon Interlocking  
Slat No. 3  
Showing Installation of Continuous Malleable  
Iron Endlocks as required by Specifications of  
the Underwriters' Laboratories, Inc.



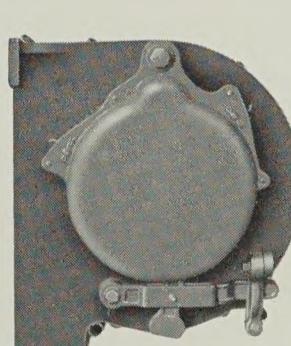
Fusible Link used  
to release the Au-  
tomatic Closing  
Mechanism in case  
of Fire



Mahon Chain-Gear Operator for  
Underwriters' Labeled Doors. This  
Operator is automatically disen-  
gaged simultaneously with the  
release of the Automatic Closing  
Mechanism



Chain-Gear Operator  
Disengaged



Automatic Release Device and Governor  
used on Mahon Underwriters' Labeled  
Rolling Steel Doors. Center: Released. At  
Right: Crank-Gear Operator Disengaged

# MAHON ROLLING STEEL DOORS

UNDERWRITERS' LABELED OR NONLABELED TO MEET EVERY REQUIREMENT

## S P E C I F I C A T I O N S

### (A GUIDE FOR SPECIFICATION WRITERS)

NOTE: This Specification may be used as is or modified to meet requirements. However, it is important that the Specification Writer READ the Specifications and select the appropriate Sub-Paragraph under (3a), (9a) and (9b), and that he include only

those items appearing in *ITALIC TYPE* that meet his requirements, or that he wishes to include as additional equipment. Typical items in this category are: Wind Locks, Safety Bottom Bars, Removable Cranks, Transformer for Power Operator Controls, Etc.

## ROLLING STEEL (DOORS) (GRILLES) (SHUTTERS)

### (1) WORK INCLUDED:

- (1a) Furnish and install (*Underwriters' Labeled*) Rolling Steel (Doors) (Grilles) (Shutters) as manufactured by The R. C. Mahon Company, Detroit 34, Michigan, or equivalent product meeting fully this manufacturer's specifications, complete with guides, hoods and operating mechanism as hereinafter specified in openings (Na. ) (ar) where (*otherwise*) indicated on drawings.
- (1b) All Rolling Steel (Daars) (Grilles) (Shutters) shall be (*manufacturer's standard construction*) (*constructed in accordance with Underwriters' Specifications and furnished with Underwriters' Label attached*) (*constructed in accordance with Underwriters' Specifications and furnished with "Underwriters' Certificate"*) (*constructed in accordance with Underwriters' Specifications and furnished WITHOUT Underwriters' Label or Certificate.*)

### (2) WORK NOT INCLUDED:

Field Painting after erection. Preparation of openings to receive Rolling Steel (Daars) (Grilles) (Shutters). Structural or miscellaneous iron work. Electric wiring and conduit required for power operators.

### (3) (CURTAINS) (GRILLES):

- (3a) Curtains shall be constructed of interlocking roll-formed (*galvanized steel*) (*stainless steel*) (*aluminum*) (*branze*) slats, formed in easy curves and deeply corrugated to provide a curtain stiffness to withstand wind pressure of 20 lbs. per square foot. Galvanized steel slats shall be tight coat galvanized with a coating of zinc not less than 1.25 ounces per square foot of flat metal, A.S.T.M. Std., free from flaking or peeling. Curtains shall be equipped with a (*rolled steel*) (*stainless steel*) (*aluminum*) (*bronze*) bottom bar consisting of two angles of equal weight, one on each side, securely fastened to the bottom of curtains for reinforcement and to provide contact against the sill when closed. (*Daar curtains shall be equipped with Windlocks.*) Note: Doors under 16 Ft. in width do not require windlocks.

**Note: Insert the paragraph below that is applicable.**

- (3a1) (*For Standard Doors and Class "D" Labeled Doors*)—The ends of alternate interlocking slats shall be fitted with malleable iron Endlocks which shall act as a wearing surface in the guides and prevent lateral movement of individual curtain slats.
- (3a1) (*For Class "A", "B", "C" Labeled Doors*)—The ends of each interlocking slat shall be fitted with malleable iron Endlocks which shall act as a wearing surface in the guides and prevent lateral movement of individual curtain slats.
- (3b) Grilles shall be constructed of continuous ( $\frac{5}{16}$ " round (*black steel painted*) (*galvanized steel*) (*stainless steel*) (*branze*) (*aluminum*) rods arranged horizontally at 2" centers and interlaced with links of the same material die-formed from not less than .078 strip  $\frac{3}{4}$ " wide. Grille shall be equipped with a bottom bar consisting of two equal leg angles, rolled from the same material as the grille proper, placed back to back and securely fastened to the bottom of the grille for reinforcement and to provide continuous contact at the sill. (*Guides and hood shall be of the same material as the grille.*) The unexposed portion of the grille, that remains inside the hood when the grille is resting on the sill, shall be made up of standard rolling steel door slots to provide for replacement of the grille with a rolling steel curtain with a minimum of labor.

### (4) GUIDES:

Guides shall be formed of standard rolled (*steel*) (*stainless steel*) (*aluminum*) (*branze*) angles not lighter than  $\frac{3}{16}$ " thick and of sufficient depth to retain curtains in place under normal wind pressure. They shall be attached to jambs, plumb and true, by bolts of not less than  $\frac{3}{8}$ " diameter, spaced not more than 2' 6" on centers for standard doors, and not more than 1' 6" on centers for Underwriters' Labeled doors. Guides shall be fitted at top into slots cast in the mouth of the roller shaft brackets.

### (5) ROLLER SHAFT:

Roller shaft shall be steel pipe of sufficient diameter to reduce deflection to not to exceed .03 inch per foot of span. Ends of roller shaft shall be completely closed by cast iron plugs machined to fit I.D. of pipe and secured by Cap Screws—NOT welded. The Roller shaft shall house all counterbalancing mechanism including an oil-tempered helical steel spring capable of producing sufficient torque to assure easy operation of the door curtain from any position. Spring tension shall be adjustable by means of an adjusting wheel on the outside of the end bracket.

### (6) BRACKETS:

Brackets shall be of heavy cast iron or steel, designed to form an end closure support for the hood. Ends of roller shaft shall be journaled into bracket hubs of sufficient thickness to provide ample bearing surface for load of roller shaft and curtain. Operator bracket hub and plug in spring end of shaft shall be fitted with self lubricating bronze bearings or permanently lubricated, sealed ball bearings.

# MAHON ROLLING STEEL DOORS

UNDERWRITERS' LABELED OR NONLABELED TO MEET EVERY REQUIREMENT

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## (7) HOODS:

Hoods shall be of not less than #24 gauge (Armca Paint Grip—hot galvanized steel BONDERIZED) (stainless steel) (aluminum) (branze) formed to fit contour of end brackets in a neat manner and reinforced with stiffening rolls at top and bottom edges.

## (8) PAINT:

Galvanized steel for curtain slats shall have 1.25 ounces of Zinc per Sq. Ft., A.S.T.M. Std., and shall be chemically cleaned and BONDERIZED for paint bond, and shall be given one dip coat of rust-inhibiting Synthetic Enamel which shall be baked on at 350° F. prior to roll forming. All other surfaces of (daar) (grille) (shutter) parts shall be given one shop coat of rust-inhibiting paint.

## (9) OPERATION:

### (9a) Note: For Standard Doors and Grilles—Insert one of the following:

- (9a1) Doors shall be operated manually by means of Handles on Bottom Bar.
- (9a1) Doors shall be operated mechanically by means of a Chain-Gear Operator—hand chain to be galvanized. Gears shall be of high grade gray iron cast from machine cut patterns. Gear reduction shall be calculated to reduce pull on hand chain to not over 35 lbs.
- (9a1) Doors shall be operated mechanically by means of a Crank-Gear Operator—Crank to be (removable and) located approximately 2' 10" from floor. Gears shall be of high grade gray iron cast from machine cut patterns. Gear reduction shall be calculated to reduce pressure exerted on crank to not over 35 lbs.
- (9a1) Doors shall be electrically operated by means of (Mahon Power Operatør 920-P. Electric Matar shall be equipped with single reduction warm gear completely housed and running in a bath af ail.) (Mahon Power Operatør 930-P. Electric Matar and Warm Reductian Gears shall be separate units ta canfarm ta JIC Standards.) Power operator shall be mounted on an independent bracket and so designed and constructed that in case of failure in the electrical system the door can be operated by means of an auxiliary chain-gear operating mechanism. A control lever shall be located within easy reach from the floor which will instantly engage the auxiliary chain-gear operating mechanism. Power unit shall be self-locking and capable of holding the door curtain in any position in case of failure of the counterbalancing spring. Electric Motor shall be Hoist Type, Open, fitted with Ball Bearings and of sufficient capacity to move the door curtain in either direction from any position. Electrical controls shall include the following: Reversing, across-the-line-type automatic starter with overload relays, solenoid brake, interlock switch, limit switch, and three button "Open," "Close," and "Stop" push button control switch. (Transfarmer shall be furnished ta reduce voltage at push button switch ta 110 volts.) (A safety battam bar shall be pravided an the daar curtain which shall be capable af stopping the downward movement of the curtain instantly upon contact with any abstraction in the daar opening.) NOTE: In employing the above Specification, Power Operator 920-P should always be specified except where conformance with JIC Standards is mandatory. NOTE: When specifying Mahon Power Operator 930-P, omit "Hoist Type, Open", line seven.
- (9a1) Doors shall be electrically operated by means of Mahon Power Operator 910-P. Operator shall consist of an electric motor and a series of cut steel spur gears completely housed and running in a bath of oil. The entire operator shall be an integral part of the roller shaft end bracket. Provision shall be made so that in case of failure in the electrical system, the door can be operated mechanically by means of an auxiliary Chain-Gear Operating Mechanism. Operator shall be so designed that the electric motor may be removed without disturbing limit switch timing, and without affecting operation of the door by means of the auxiliary chain-gear operator. A control lever shall be located within easy reach from the floor which will instantly disengage the power operator and engage the auxiliary chain-gear mechanism for mechanical operation. Electric motor shall be Squirrel Cage, Open, Ball Bearing, Standard NEMA Frame, of sufficient capacity to produce curtain travel of not less than one foot per second. Motor shall be protected from overload by means of overload relays in reversing switch. Electrical controls shall include the following: Reversing, across-the-line-type automatic starter with overload relays, solenoid brake, interlock switch, limit switch, and three button "Open," "Close" and "Stop" push button control switch. (Transfarmer shall be furnished ta reduce voltage at push button switch ta 110 volts.) (A safety battam bar shall be pravided an the daar curtain which shall be capable af stopping the downward movement of the curtain instantly upon contact with any abstraction in the daar opening.)

### (9b) Note: For Underwriters' Labeled Doors—Insert one of the following:

- (9b1) Doors shall be operated manually in general service by means of handles on the bottom bar.
- (9b1) Doors shall be operated mechanically in general service by means of a Chain-Gear Operator—hand chain to be galvanized. All gears shall be of high grade gray iron cast from machine cut patterns. Gear reduction shall be calculated to reduce pull exerted on hand-chain to not over 35 lbs.
- (9b1) Doors shall be operated mechanically in general service by means of a Crank-Gear Operator—Crank to be (removable and) located approximately 2' 10" from floor. Gears shall be high grade gray iron cast from machine cut patterns. Gear reduction shall be calculated to reduce pressure exerted on crank to not over 35 lbs.

### Note: Insert following for all Underwriters' Labeled Doors.

Upon fusing of a fusible link, the door curtain shall be started downward by shock torque-action of a helical steel spring released in the automatic closing mechanism. Downward descent of door curtain shall be controlled by an oscillating safety governor so that it will come to rest on the sill without impact. Spring shall exert continuous down pressure on the door curtain until door is reset. Automatic Closing Mechanism shall not in any way affect operation of the door in general service.

# MAHON ROLLING STEEL DOORS

UNDERWRITERS' LABELED OR NONLABLED TO MEET EVERY REQUIREMENT

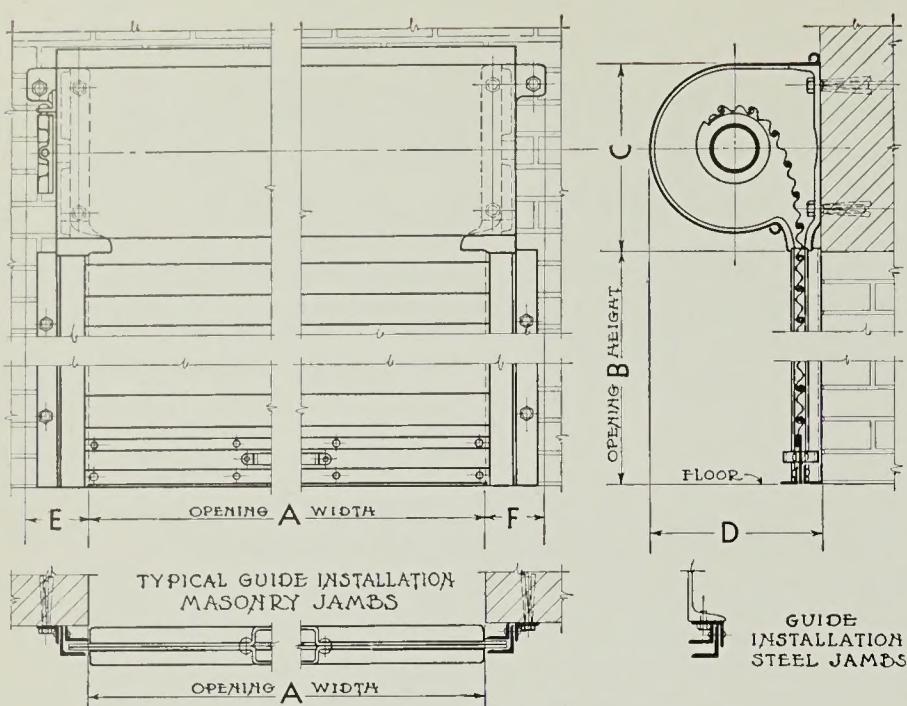


TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.	TO 12				
DIMENSIONS IN.	C D E F	C D E F	C D E F	C D E F	
OPENING WIDTH A FT.	TO 8	16 15 5 5			
	8 TO 12	16 15 6 6			

## TYPE 100-M

### Standard Push-up Type

This door is designed for manual operation and is fitted with handles on the bottom rail. It is mounted on the face of the wall with guide channels clear of the opening and is suitable for openings up to 12'4" x 7'4" in any type of building. The weight of the shutter curtain is counterbalanced perfectly by means of an adjustable counterbalancing mechanism. This feature, together with the extra deep steel plate at the bottom rail, to which the handles are attached, insures free, easy operation at all times. Hot dipped galvanized steel is used in the manufacture of the door curtain and hood. The cast iron end brackets, which support the roller shaft and housing, are fitted with appropriate bearings to provide long life with minimum maintenance.

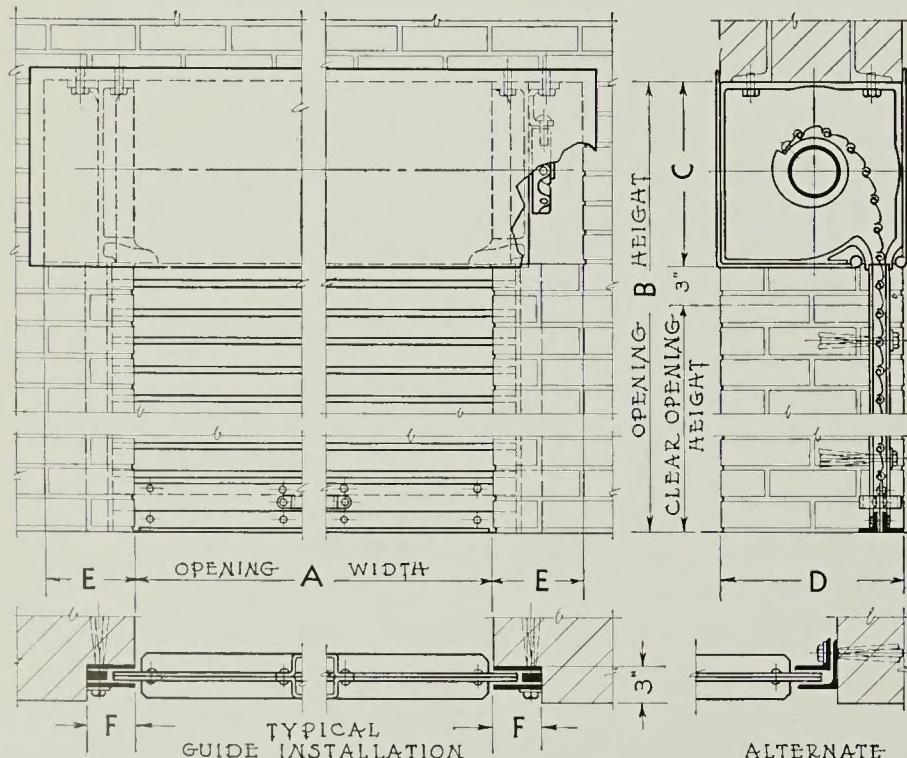
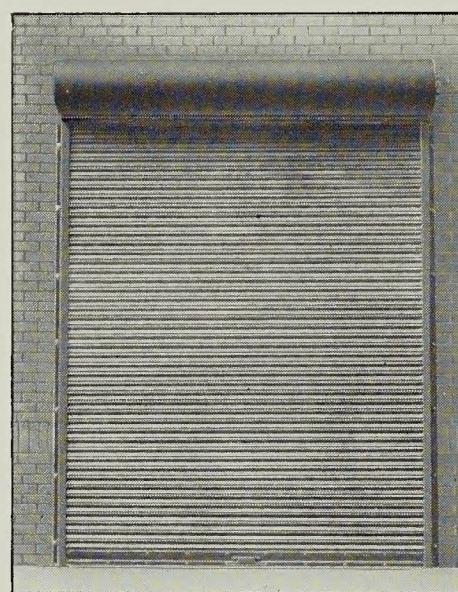


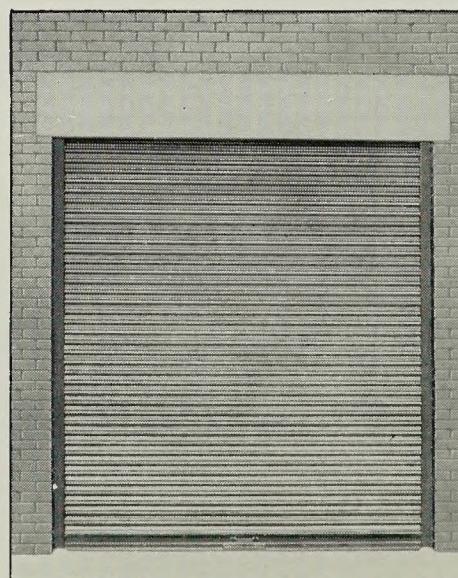
TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.	TO 14				
DIMENSIONS IN.	C D E F	C D E F	C D E F	C D E F	
OPENING WIDTH A FT.	TO 8	16 15 5 4			
	8 TO 12	16 15 6 5			

## TYPE 150-MB

### Between Jambs Push-up Type

This door is designed for manual operation in general service. It is mounted below the lintel in the door opening between jambs and is suitable for openings up to 12'4" x 8'8" in any type of building. This type of door is generally used where "face of wall" mounting is impracticable. In new construction, door openings can be designed with guide channels recessed in and flush with the jambs. This makes a



very neat appearing installation and provides protection for the guide channels. The weight of the door curtain is counterbalanced perfectly by means of an adjustable counterbalancing mechanism. This feature, together with the extra deep steel plate at the bottom rail, to which the handles are attached, insures free, easy operation at all times.

**MAHON ROLLING STEEL DOORS**

UNDERWRITERS' LABELED OR NONLABELED TO MEET EVERY REQUIREMENT

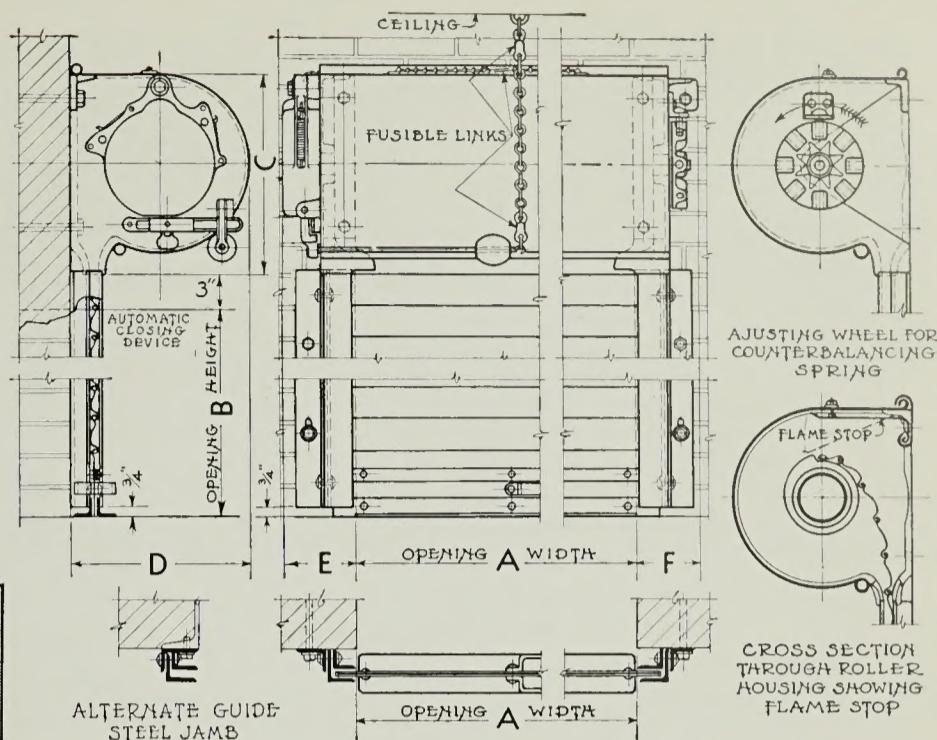
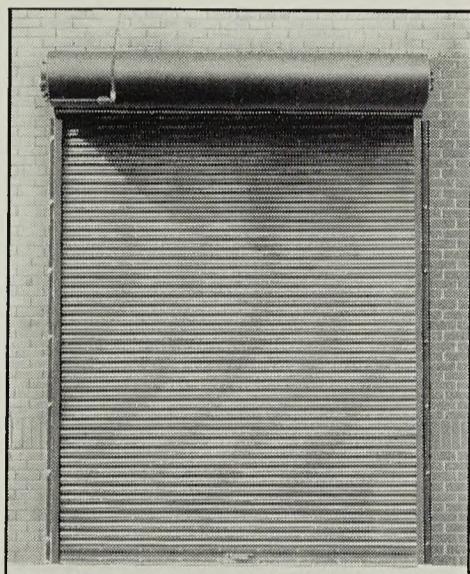
# **TYPE 200-ML**

**See NOTE, Page 5, "Underwriters' Certificate"**

#### **Push-up Type—Underwriters' Labeled**

This door, mounted on the face of the wall, is primarily a fire door and normally remains open. It can, however, be operated in general service, if desired, by means of handles fitted to the bottom bar. It is equipped with an automatic closing mechanism which is released by a fusible link in case of fire. Mahon Fire Doors of this type can be quickly reset, after automatic closing, by simply resetting the automatic closing release device, replacing the fusible link, and rolling the door curtain up to the full open position.

Mahon Type 200-ML is approved by the Underwriters' Laboratories, Inc., for Class A, B, C, and D openings, not exceeding 120 sq. ft., in exterior Walls, Fire Walls, Vertical Shafts, and Corridor and Room Partitions—neither dimension of the openings may exceed 12' 0".



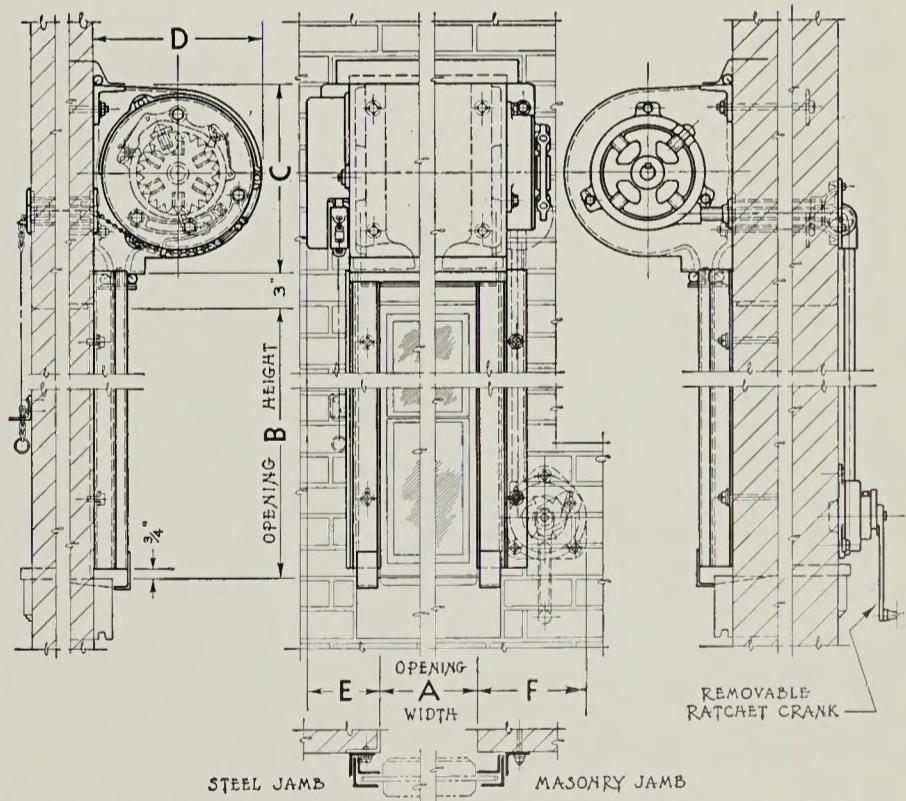
## TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.	TO 12			
DIMENSIONS IN.	C D E F	C D E F	C D E F	C D E F
OPENING WIDTH A FT.	TO 4	16 15 9 6		
	4 TO 12	16 15 10 7		

## **TYPE 250-CRL**

## **Window Shutter—Underwriters' Labeled**

This Automatic Window Fire Shutter is typical of a complete line of Mahon Underwriters' Labeled Fire Shutters designed to meet any requirement. It is manufactured in strict compliance with the requirements of the Underwriters' Laboratories, Inc., and is furnished with the Underwriters' Label attached for Class "D" openings. These Window Fire Shutters can be furnished for mounting on the inside or outside face of the wall, or in the opening below the lintel with the shutter curtain operating between jambs. All window shutters are equipped with the same automatic release and closing mechanism, and a similar rewinding device. A test release chain is provided. Resetting after test closing is simple—pull and lock the test release chain to re-engage the automatic release device, and crank shutter curtain to full open position.



## TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.	T O 12			
DIMENSIONS IN.	C D E F	C D E F	C D E F	C D E F
A FT.	T O 9	16 15 9 10		
OPENING WIDTH A FT.	9 T O 12	16 15 10 11		

# MAHON ROLLING STEEL DOORS

UNDERWRITERS' LABELED OR NONLABLED TO MEET EVERY REQUIREMENT

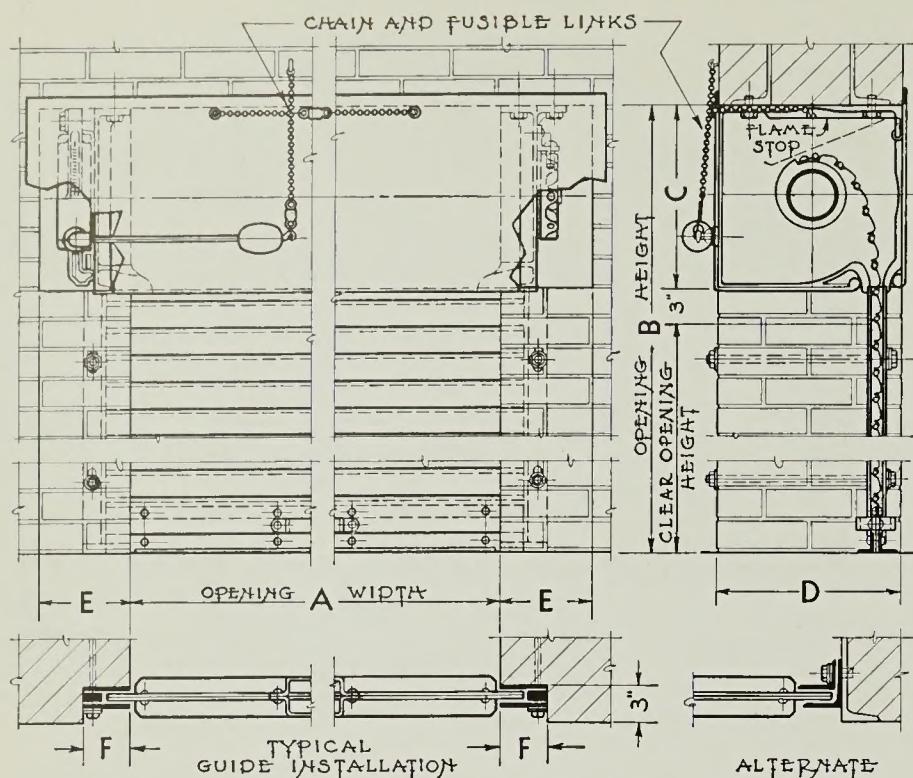


TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.	7 TO 13			
DIMENSIONS IN.	C D E F	C D E F	C D E F	C D E F
TO 4	16 15 10 4			
4 TO 12	16 15 10 5			

## TYPE 300-MBL

See NOTE, Page 5, "Underwriters' Certificate"

### Push-up Type—Underwriters' Labeled

This door, mounted between jambs, is primarily a fire door and normally remains open. It is fitted with handles on the bottom bar, for manual operation in general service, and is equipped with an automatic closing mechanism which closes the door in case of fire. It is generally used where existing conditions prohibit "face of wall" mounting. The automatic closing mechanism can be quickly reset, after automatic closing, by simply resetting the automatic closing release device, replacing the fusible link, and pushing the door curtain up to the full open position. Mahon Type 300-MBL is approved by the Underwriters' Laboratories, Inc., and carries the regular Label for Class A, B, C, and D openings, not exceeding 120 sq. ft., in Exterior Walls, Fire Walls, Vertical Shafts, and Corridor and Room Partitions—neither dimension of openings may exceed 12' 0".

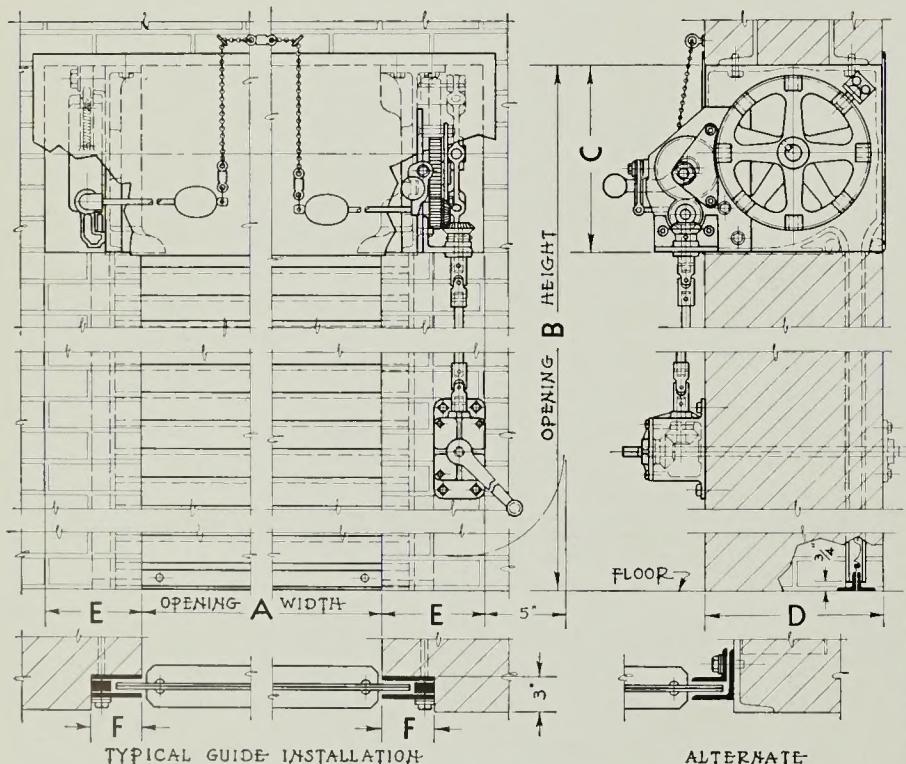
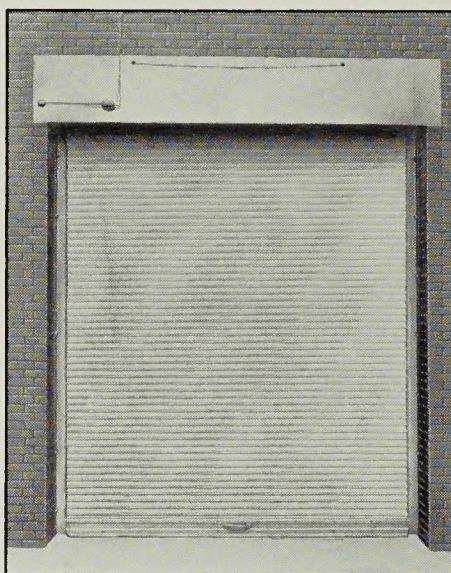


TABLE OF CLEARANCE DIMENSIONS

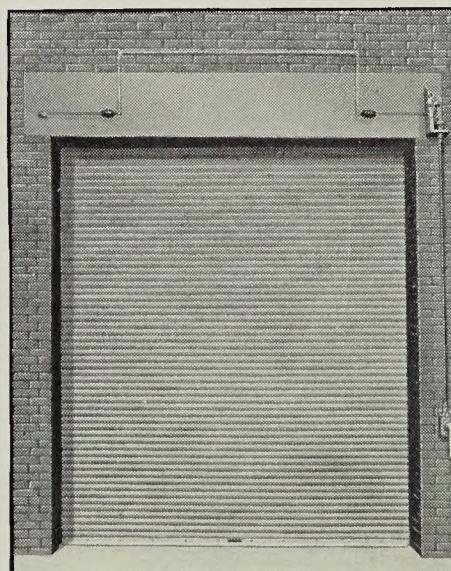
OPENING HEIGHT B FT.	7 TO 13			
DIMENSIONS IN.	C D E F	C D E F	C D E F	C D E F
TO 4	16 15 10 4			
4 TO 12	16 15 10 5			

## TYPE 375-CRBL

See NOTE, Page 5, "Underwriters' Certificate"

### Crank Operated—Underwriters' Labeled

Type 375-CRBL is a crank operated fire door for installation in fire walls or corridors. It is equipped with an automatic closing mechanism released by fusible links in case of fire. The fusible links and release devices are so arranged as to instantly disengage the crank-gear operator simultaneously with the release of the automatic closing mechanism. Doors of this type can be quickly reset, after automatic closing, by simply resetting the automatic release devices, replacing the fusible links and cranking the door curtain up to the full open position. Mahon Type 375-CRBL is approved by the Underwriters' Laboratories, Inc., for Class A, B, C, and D openings not exceeding 120 sq. ft. in Exterior Walls, Fire Walls, Vertical Shafts, and Corridor and Room Partitions—neither dimension of the openings may exceed 12' 0".



# MAHON ROLLING STEEL DOORS

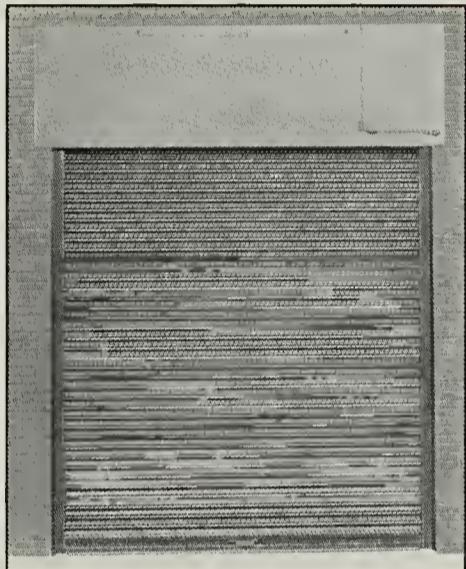
# TYPE 400-MBL

**See NOTE, Page 5, "Underwriters' Certificate"**

## **Push-up Type—Underwriters' Labeled**

Type 400-MLB is a double fire door for installation in fire walls with roller housings placed one above the other between jambs. It is equipped with handles on the bottom bar and an automatic closing mechanism which is released by fusible links in case of fire. The ingenious arrangement of fusible links insure instant release of the automatic closing mechanism which operates both fire doors simultaneously. These doors normally remain open, but may be operated manually in general service. They can be quickly reset after automatic closing by simply resetting the automatic closing release devices, replacing the fusible links, and pushing the door curtains up to full open position. This double type fire door is approved for Class A openings in fire walls not exceeding 120 sq. ft. Neither dimension of the openings may exceed 12' 0".





**TYPE 600-CHL**

**See NOTE, Page 5, "Underwriters' Certificate"**

#### **Chain Operated—Underwriters' Labeled**

This door is mechanically operated in general service by means of an endless chain-gear operator. It is equipped with an automatic closing mechanism released by fusible links in case of fire. The fusible links and release devices are so arranged as to instantly disengage the chain-gear operator simultaneously with the release of the automatic closing mechanism. Doors of this type can be quickly reset, after automatic closing, by simply resetting the automatic release devices, replacing the fusible links, and rolling the door curtain up to the full open position. Mahon Type 600-CHL is approved by the Underwriters' Laboratories, Inc., for Class A, B, C, and D openings, not exceeding 120 sq. ft., in Exterior Walls, Fire Walls, Vertical Shafts, and Corridor and Room Partitions—neither dimension of the openings may exceed 12' 0".

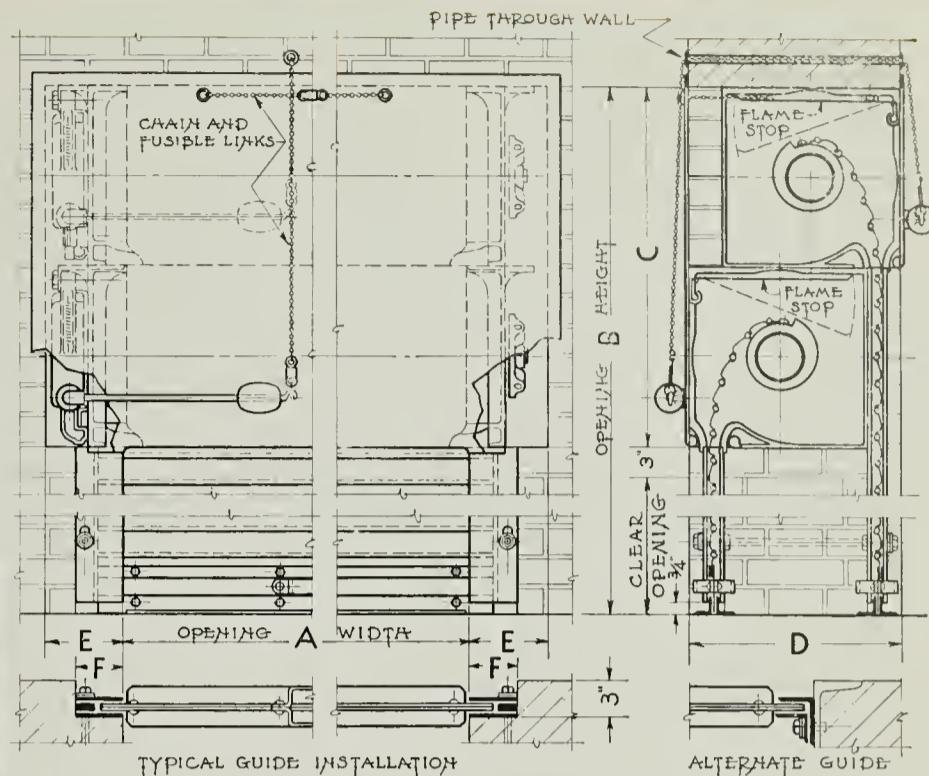
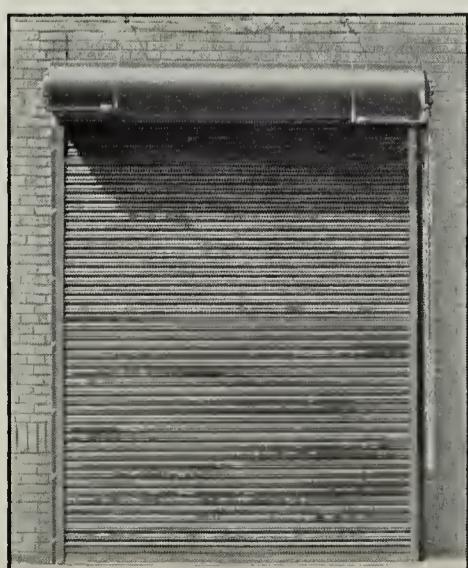


TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.	9 TO 14			
DIMENSIONS IN.	C D E F	C D E F	C D E F	C D E F
OPENING WIDTH A FT.	TO 4	31 18 10 4		
	4 TO 12	31 18 10 5		

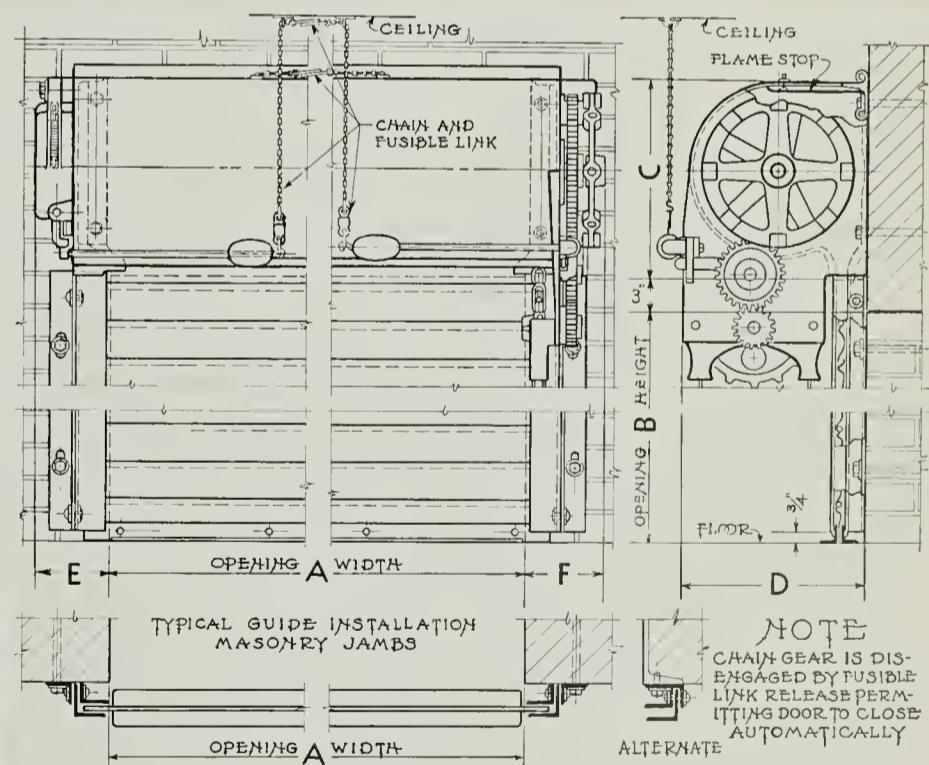


TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.	TO 12	12 TO 14	14 TO 16	16 TO 18	
DIMENSIONS IN.	C D E F	C D E F	C D E F	C D E F	
OPENING WIDTH A FT.	TO 12	16 15 10 9	18 17 10 10	20 19 11 11	22 21 13 13
	12 TO 16	18 17 10 10	18 17 10 10	20 19 11 11	22 21 13 13
	16 TO 18	20 19 11 11	20 19 11 11	20 19 11 11	22 21 13 13

# MAHON ROLLING STEEL DOORS

UNDERWRITERS' LABELED OR NONLABLED TO MEET EVERY REQUIREMENT

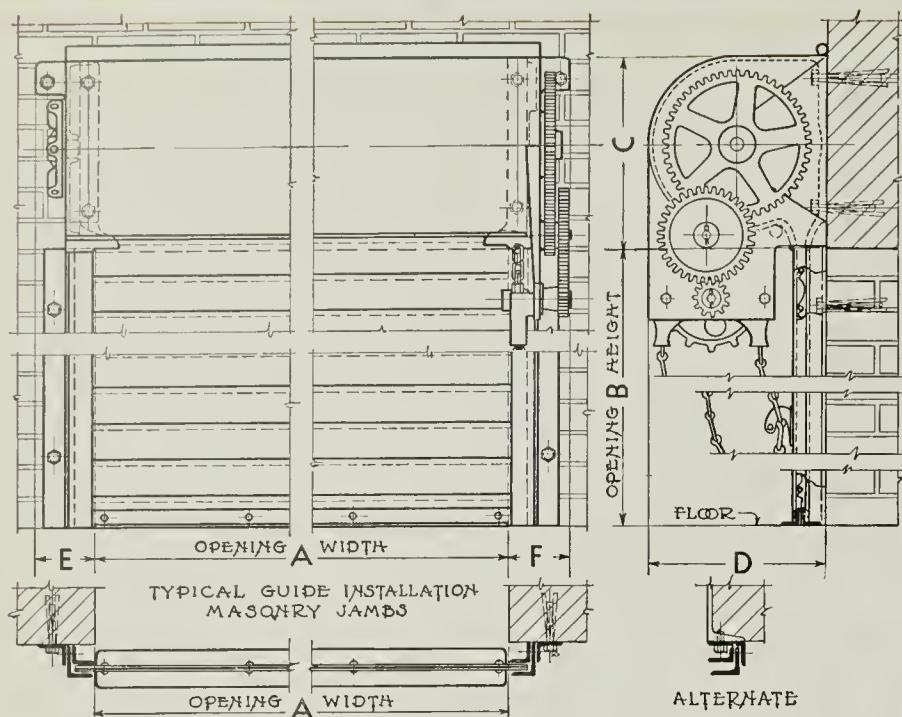


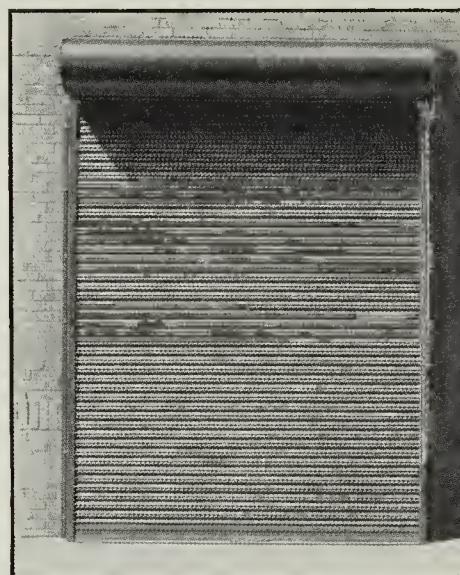
TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.	TO 12		12 TO 14		14 TO 16		16 TO 22	
	C	D	E	F	C	D	E	F
TO 12	16	15	6	8	18	17	7	7
12 TO 16	18	17	7	7	18	17	7	7
16 TO 20	20	19	8	9	20	19	8	9
20 TO 24	22	21	9	10	22	21	9	10

## TYPE 700-CH

### Standard Chain-Gear Operated Door

Mahon Type 700-CH is a standard mechanically operated door mounted on the face of the wall. It is a very popular type and is generally used in factories, shipping docks, warehouses, etc., where doors of medium size are required. Doors of this type are operated by means of an endless chain, sprocket, and either a simple or compound gear arrangement, depending upon the size of the door. They can be quickly opened or closed with ease, being perfectly counterbalanced by means of an adjustable counterbalancing mechanism.



When furnished for large exterior openings, where conditions are such that they will be subjected to excessive wind pressures, Mahon doors of this type are equipped with Windlocks to prevent the door curtain from pulling out of the guide channels under abnormal conditions. See pages 2 and 3.

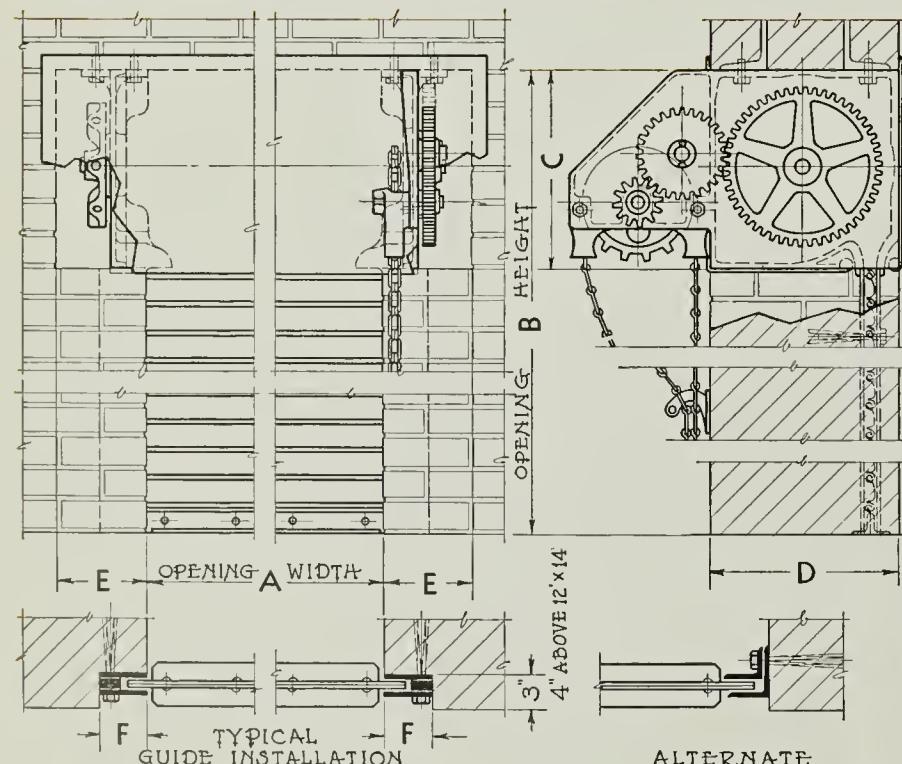


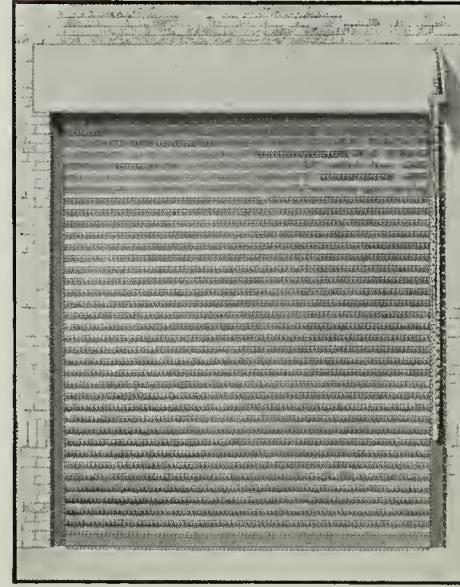
TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.	TO 14		14 TO 15					
	C	D	E	F	C	D	E	F
TO 9	16	15	7	4	18	17	9	5
9 TO 12	16	15	8	5	18	17	9	5
12 TO 14	18	17	9	5	18	17	9	5

## TYPE 700-CHB

### Standard Chain-Gear Operated Door

Mahon Type 700-CHB is a standard mechanically operated door mounted in the opening between jambs. It meets every industrial or commercial requirement for openings of medium size where face of wall mounting is undesirable. This door, like Type 700-CH, is operated by means of an endless chain, sprocket, and a compound gear arrangement which is calculated with respect to the door size. It can be quickly opened, or closed with ease, being perfectly counterbalanced by means of an adjustable counterbalancing mechanism.



When furnished for large openings in exterior walls, where conditions are such that they will be subjected to excessive wind pressures, Mahon doors of this type are equipped with Windlocks to prevent the door curtain from pulling out of the guide channels under abnormal conditions. See pages 2 and 3.

# MAHON ROLLING STEEL DOORS

UNDERWRITERS' LABELED OR NONLABELED TO MEET EVERY REQUIREMENT

## TYPE 700-CHG

### Standard Grille-Chain-Gear Operated

Mahon Rolling Steel Grille TYPE 700-CHG is mounted on the face of the wall—others, available, may be mounted in corridors or door openings with guides set flush with walls or jambs. Grilles up to 90 sq. ft. may be manually operated, however, any standard Mahon operating device can be furnished with Mahon Grilles for mechanical or power operation. These grilles can also be furnished in galvanized steel, stainless steel, bronze or aluminum . . . they embody the same basic operating principle and the same high quality workmanship as are found in Mahon Rolling Steel Doors. Mahon Grilles provide positive protection against intrusion and burglary without sacrificing daylight or ventilation. The grille proper, can be readily replaced with a standard steel slat curtain at any time to suit climatic conditions.

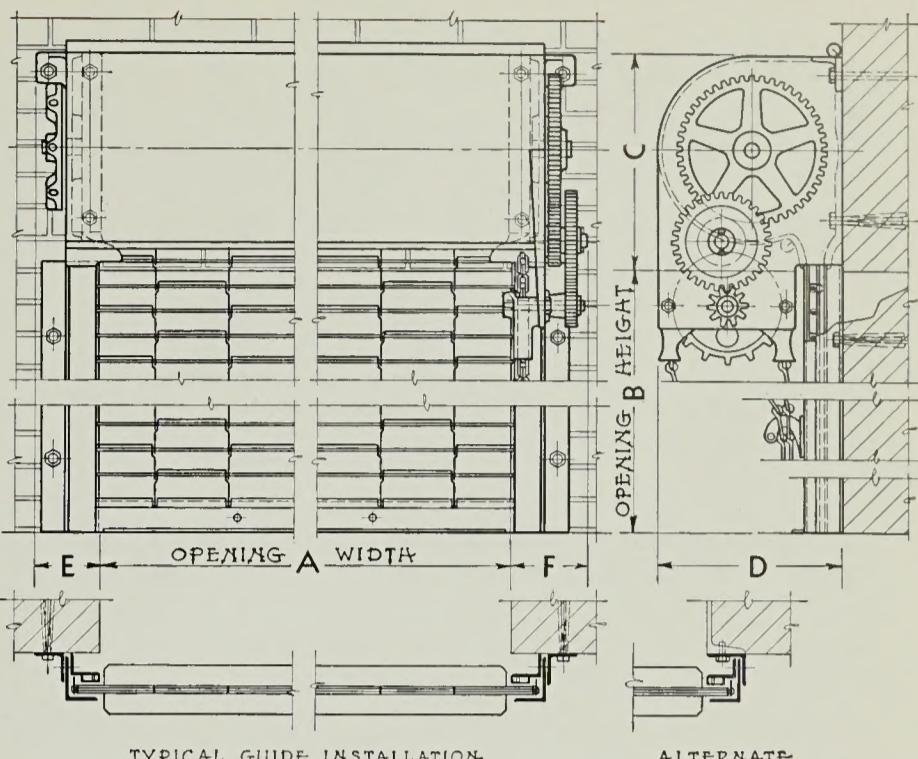
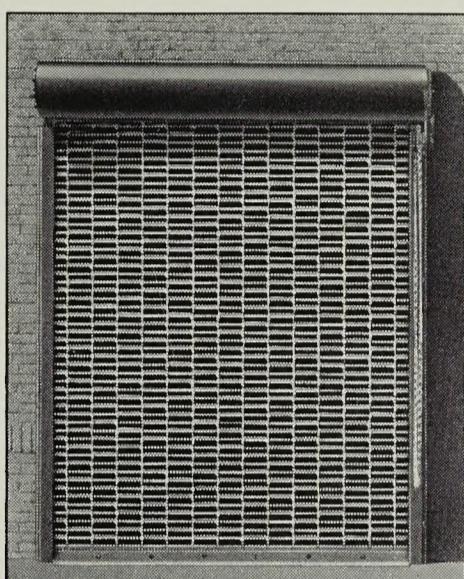


TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.	TO 10			10 TO 12			12 TO 16						
	C	D	E	F	C	D	E	F	C	D	E	F	
OPENING WIDTH A FT.	TO 16	18	17	7	7	20	19	8	9	22	21	9	10
	16 TO 20	20	19	8	9	20	19	8	9	22	21	9	10

## TYPE 750

### Multiple Doors with Intermediate Posts

Type 750 is two or more Mahon Standard Rolling Steel Doors with special arrangement of end brackets and equipped with intermediate hinged, sliding, or removable posts which form the guide channels between doors. Doors of this type are ideally suitable for dividing walls in gymnasiums, armories, etc., or are adaptable to unusually wide openings where it is necessary to use the entire opening only occasionally. When doors are opened, the intermediate posts can be moved or swung up clear, making the entire opening available for use. These rolling steel doors can be furnished with Chain-Gear Operators, or either of Mahon Power Operators 920-P or 930-P. If power operators are installed, controls can be arranged to permit operation of the doors simultaneously or individually as desired.

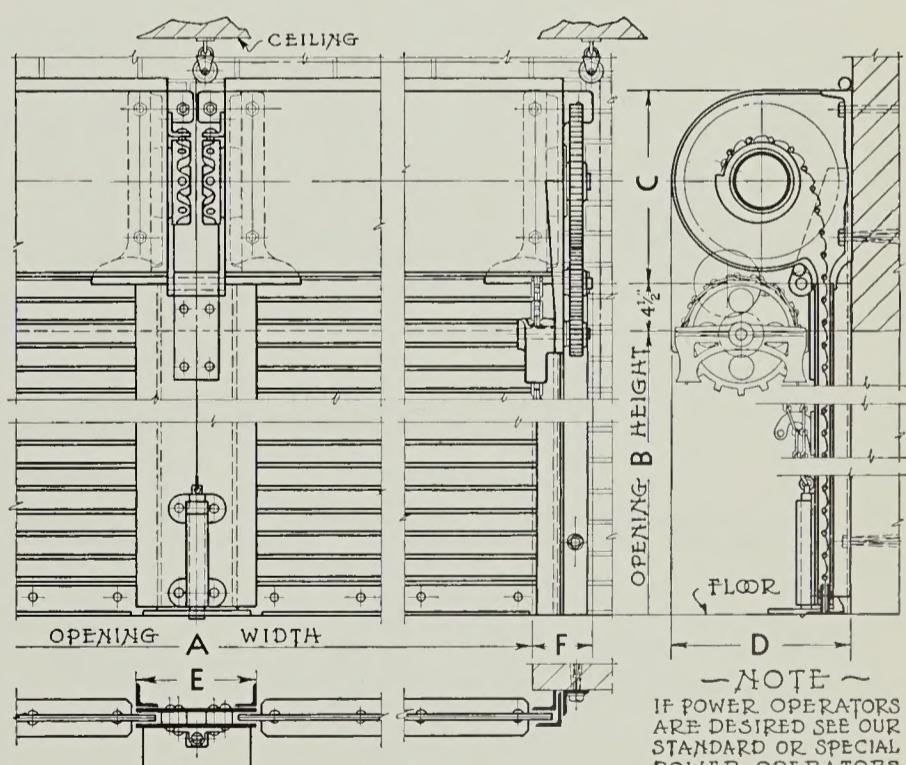
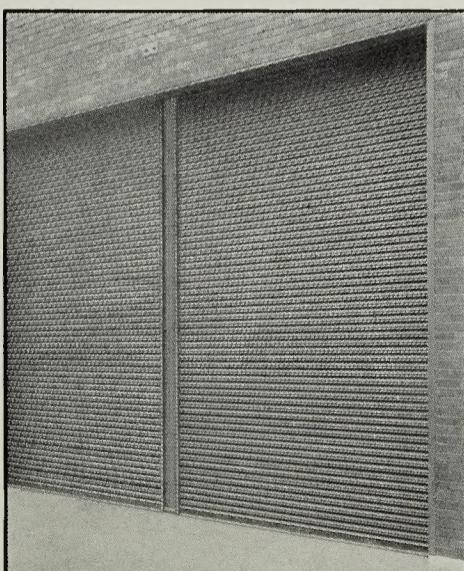


TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.	TO 12			12 TO 14			14 TO 16			16 TO 22			
	C	D	E	F	C	D	E	F	C	D	E	F	
OPENING WIDTH A FT.	TO 24	16	15	12	8	18	17	14	7	20	19	16	9
	24 TO 32	18	17	14	7	18	17	14	7	20	19	16	9
	32 TO 40	20	19	16	9	20	19	16	9	20	19	16	9
	40 TO 48	22	21	18	10	22	21	18	10	22	21	18	10

# MAHON ROLLING STEEL DOORS

UNDERWRITERS' LABELED OR NONLABELED TO MEET EVERY REQUIREMENT

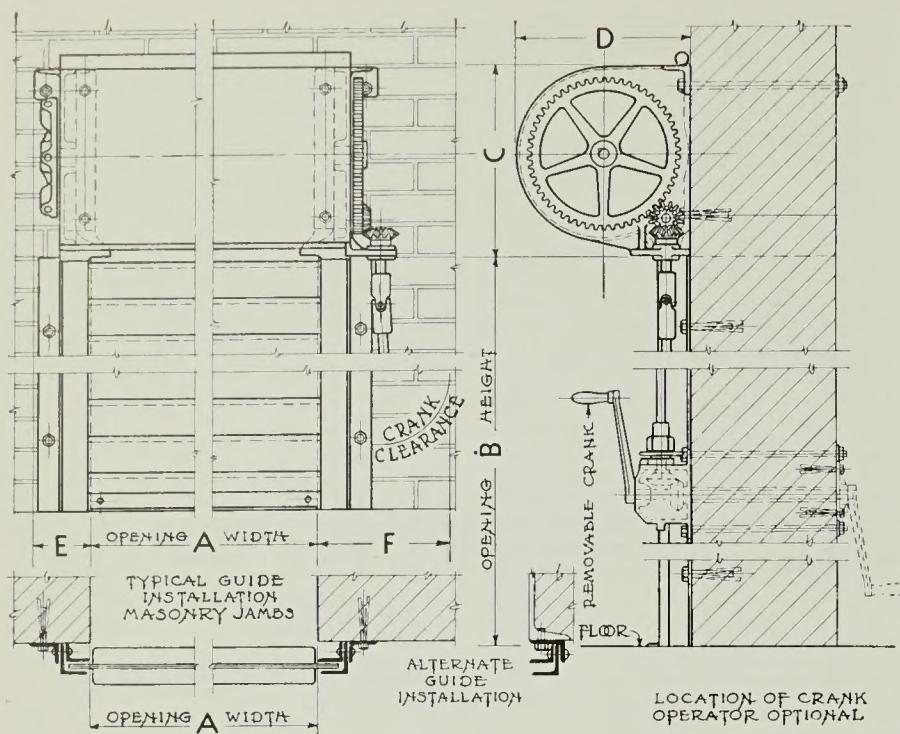


TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.	TO 12	12 TO 14	14 TO 16	16 TO 22
DIMENSIONS IN.	C D E F	C D E F	C D E F	C D E F
TO 12	16 15 6 22	18 17 7 22	20 19 8 23	22 21 9 24
12 TO 16	18 17 7 22	18 17 7 22	20 19 8 23	22 21 9 24
16 TO 20	20 19 8 23	20 19 8 23	20 19 8 23	22 21 9 24
20 TO 24	22 21 9 24	22 21 9 24	22 21 9 24	22 21 9 24

## TYPE 800-CR

### Standard Crank Operated Door

Mahon Rolling Steel Door, Type 800-CR, mounted on the face of the wall, is suitable for use in any kind of building where doors of medium size are required. It is operated mechanically by means of a crank-gear operator. The crank can be located either on the inside or outside of the building, or, the door can be furnished with a removable crank arrangement for operation from both sides of the wall if desired. Location of crank should be specified in requests for estimates or bids on this type of door.

When furnished for openings in exterior walls, where conditions are such that they will be subjected to excessive wind pressures, Mahon doors of this type are equipped with Windlocks to prevent the possibility of the door curtain pulling out of the guide channels under abnormal conditions.

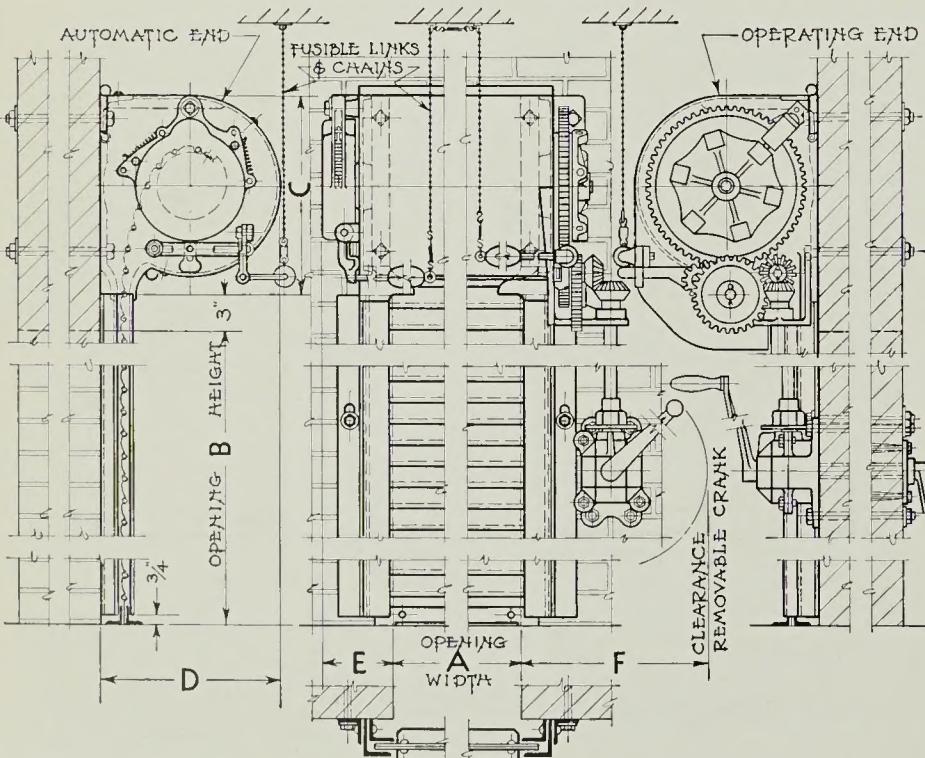
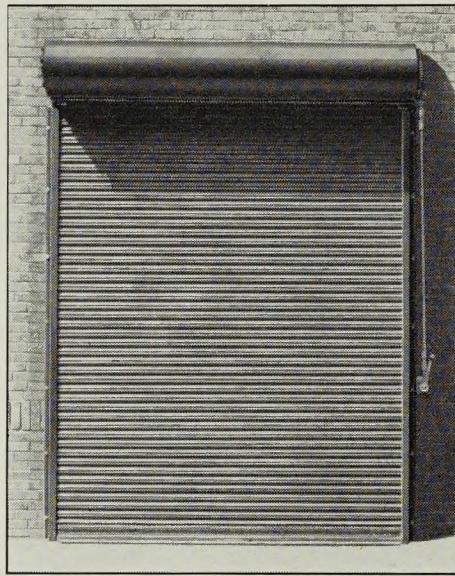


TABLE OF CLEARANCE DIMENSIONS

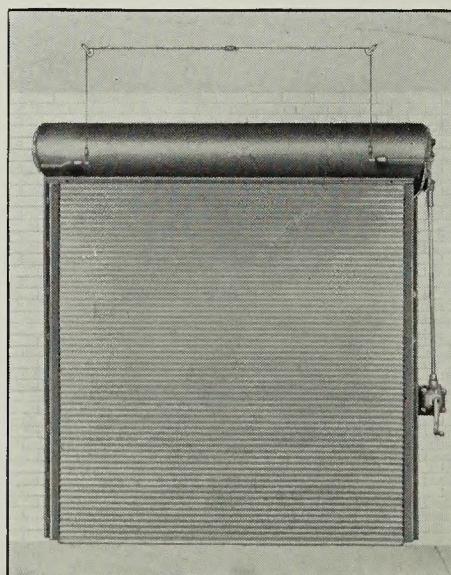
OPENING HEIGHT B FT.	TO 12	12 TO 14	14 TO 16	16 TO 18
DIMENSIONS IN.	C D E F	C D E F	C D E F	C D E F
TO 12	16 15 10 22	18 17 10 23	20 19 11 24	22 21 13 25
12 TO 16	18 17 10 23	18 17 10 23	20 19 11 24	22 21 13 25
16 TO 18	20 19 11 24	20 19 11 24	20 19 11 24	22 21 13 25

## TYPE 850-CRL

See NOTE, Page 5, "Underwriters' Certificate"

### Crank Operated—Underwriters' Labeled

This door is mechanically operated in general service by means of a crank-gear operator, and is equipped with an automatic closing mechanism released by fusible links in case of fire. The fusible links and release devices are so arranged as to instantly disengage the operator simultaneously with the release of the automatic closing mechanism. The automatic closing mechanism can be quickly reset, after automatic closing, by simply resetting the automatic release devices, replacing the fusible links, and rolling the door curtain up to the full open position. Mahon Type 850-CRL is approved by the Underwriters' Laboratories, Inc., and carries the regular Label for Class A, B, C, and D openings, not exceeding 120 sq. ft., in Exterior Walls, Fire Walls, Vertical Shafts, and Corridor and Room Partitions—neither dimension of openings may exceed 12' 0".



AVERY  
CLASSICS

# MAHON ROLLING STEEL DOORS

UNDERWRITERS' LABELED OR NONLABELED TO MEET EVERY REQUIREMENT

15

## TYPE 920-P

### Standard Power Operated Door

This door is operated by means of a power unit mounted on an independent bracket. The operator consists of an electric motor with single reduction worm gear completely housed and running in a bath of oil, sprockets and roller chain drive, and an auxiliary chain-gear operating mechanism. See description on Page 4 and Specifications for details. Operation is controlled by push button switches, located on either or both sides of the wall, with "Open" and "Close" buttons and an emergency "Stop" button. In case of failure in the electrical system, this operator is equipped with an engaging lever, located within easy reach from the floor, which immediately engages the auxiliary chain-gear operating mechanism. The flexibility of this operator, as regards location, meets virtually all conditions.

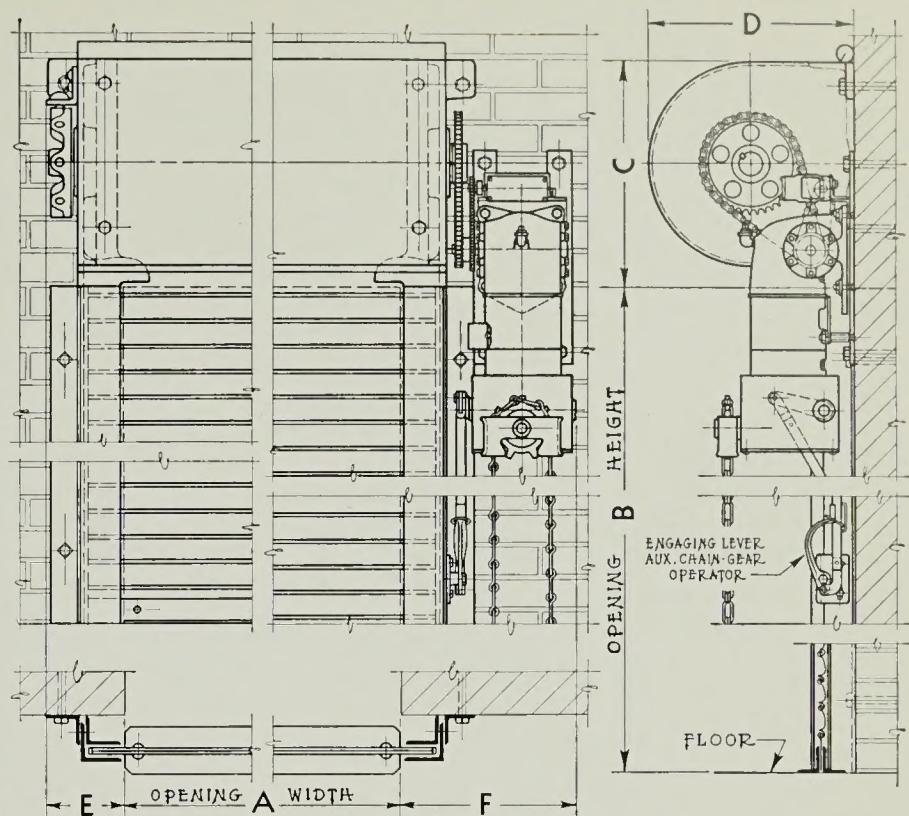
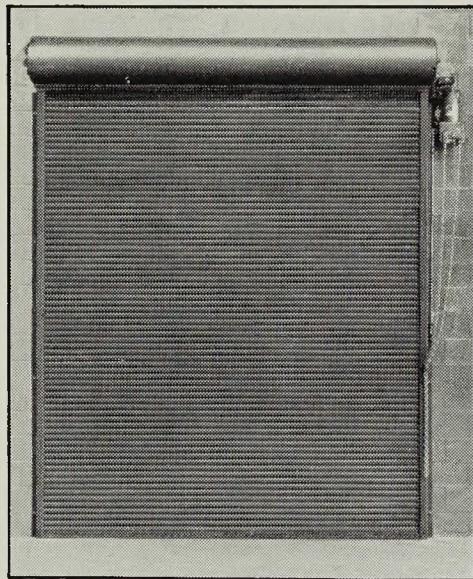


TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.	TO 12	12 TO 14	14 TO 16	16 TO 22
DIMENSIONS IN.	C D E F	C D E F	C D E F	C D E F
OPENING WIDTH A FT. TO 12	16 15 6 15	18 17 7 15	20 19 8 16	22 21 9 18
12 TO 16	18 17 7 16	18 17 7 16	20 19 8 18	22 21 9 19
16 TO 20	20 19 8 18	20 19 8 18	20 19 8 19	22 21 9 21

CLEARANCE DIMENSIONS FOR LARGER OPENINGS ON REQUEST

## TYPE 910-P

### Special Power Operated Door

This door is operated by means of a power unit which is an integral part of the roller shaft end bracket. It consists of an electric motor and reduction gears which are enclosed in an oil tight housing and run in a bath of oil. Electrical controls are similar to Type 920-P. See description on Page 4 and Specifications for complete details. This operator is also equipped with an auxiliary chain-gear operating mechanism. In case of failure in the electrical system, operation of a throw-out lever, located within easy reach from the floor, will immediately disengage the power unit and engage the auxiliary chain-gear operating mechanism. The electric motor can be completely removed without interfering with the operation of the door by means of the auxiliary chain-gear operator.

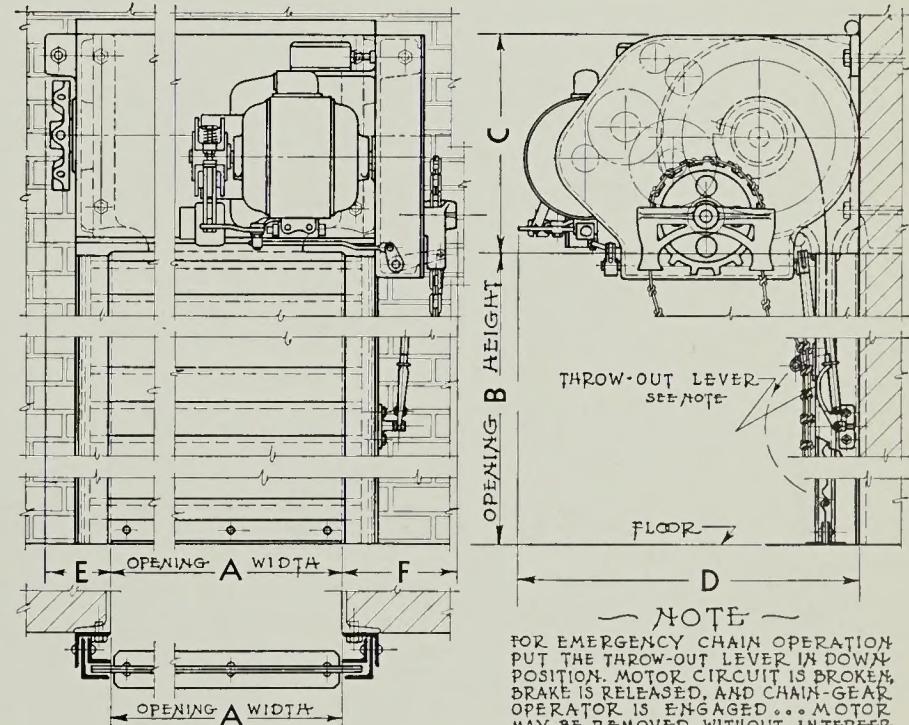
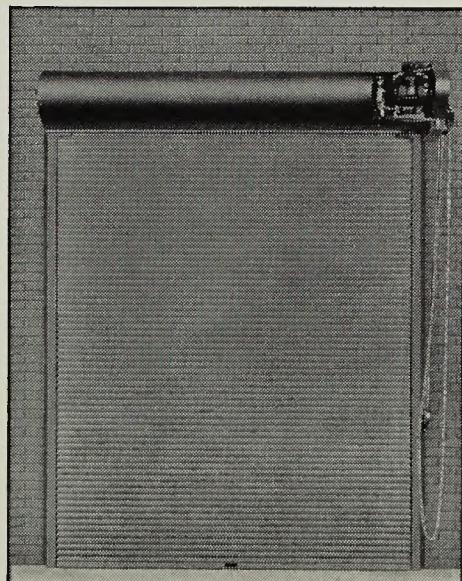


TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.	TO 14	14 TO 22		
DIMENSIONS IN.	C D E F	C D E F	C D E F	C D E F
OPENING WIDTH A FT. TO 16	18 31 7 12	22 36 9 14		
16 TO 20	22 36 9 14	22 36 9 14		

CLEARANCE DIMENSIONS FOR LARGER OPENINGS ON REQUEST

NOTE  
FOR EMERGENCY CHAIN OPERATION PUT THE THROW-OUT LEVER IN DOWN POSITION. MOTOR CIRCUIT IS BROKEN, BRAKE IS RELEASED, AND CHAIN-GEAR OPERATOR IS ENGAGED... MOTOR MAY BE REMOVED WITHOUT INTERFERING WITH EMERGENCY CHAIN OPERATOR

# MAHON BUILDING PRODUCTS

## MAHON CONSTRUCTION SERVICES

Rolling steel doors (standard or Underwriters' labeled)  
Aluminum or steel curtain walls  
Metalclad fire walls (Underwriters' labeled)  
M-floors (steel cellular sub-floors)  
Long-span M-deck (cellular or open beam)  
Steel roof deck  
Acoustical metal walls, partitions and roof decks  
Permanent concrete floor forms

Structural steel—fabrication and erection  
Steel fabrication—Weldments  
Geodesic domes—fabrication and erection



**THE R. C. MAHON COMPANY — DETROIT 34, MICHIGAN**

# MAHON

MANUFACTURING PLANTS—Detroit, Michigan and Torrance, California

SALES-ENGINEERING OFFICES—Detroit, New York, Chicago, San Francisco and Torrance.

REPRESENTATIVES IN ALL PRINCIPAL CITIES